Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): An apparatus comprising:

a rendering engine that defines a rectangular area of pixels that bounds an entire triangular area of the pixels that defines a triangle to be rendered, wherein the rectangular area of pixels includes one or more lines of pixels; and

the rendering engine further selects each of the one or more lines of pixels within the rectangular area of pixels, sequentially evaluates coordinates associated with the pixels of each line of pixels starting at one end of the rectangular area to determine whether the one or more pixels fall within the triangular area, wherein the one end of the rectangular area is common for the sequential evaluation of each line of pixels, ceases evaluation of the coordinates associated with the pixels of each line of pixels upon determining that at least one pixel of the line falls within the triangular area and a current pixel no longer falls within the triangular area, and stores information indicating which of the pixels fall within the triangular area.

Claim 2 (Original): The apparatus of claim 1, wherein the rendering engine evaluates the coordinates of the pixels in accordance with a set of linear equations that describe edges of the triangular area.

Claim 3 (Previously Presented): The apparatus of claim 2, wherein the rendering engine computes a coefficient matrix M_C for computing linear coefficients for the set of linear equations, and applies the coefficient matrix M_C to one or more pixels within the rectangular area to determine whether each of the one or more pixels falls within the triangular area.

Claim 4 (Currently Amended): The apparatus of claim 3, wherein the rendering engine applies the coefficient matrix M_C to a current one of the one or more pixels (X_C, Y_C) within the rectangular area, wherein ~~to determine whether:~~

~~$$M_C \begin{bmatrix} X_C \\ Y_C \\ 1 \end{bmatrix} \leq \begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$$, where~~

the coefficient matrix M_C equals:

$$M_c = \begin{bmatrix} y_1 - y_2 & x_2 - x_1 & x_1 y_2 - x_2 y_1 \\ y_2 - y_0 & x_0 - x_2 & x_2 y_0 - x_0 y_2 \\ y_0 - y_1 & x_1 - x_0 & x_0 y_1 - x_1 y_0 \end{bmatrix} \text{and}$$

vertices $v_0(x_0,y_0)$, $v_1(x_1,y_1)$, and $v_2(x_2,y_2)$ are vertices of the triangular area, wherein the rendering engine determines that the current one of the one or more pixels is within the triangular area when $M_C \begin{bmatrix} X_C \\ Y_C \\ 1 \end{bmatrix} \leq \begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$.

Claim 5 (Original): The apparatus of claim 1, wherein the rendering engine selectively renders the pixels that fall within the triangular area by computing updated pixel data for those pixels in accordance with a set of linear equations that describe one or more attributes associated with the triangular area.

Claim 6 (Original): The apparatus of claim 5, wherein the attribute values comprise at least one of color values and texture values.

Claim 7 (Previously Presented): The apparatus of claim 5, wherein the rendering engine computes an inverse coefficient matrix M^{-1} for computing linear coefficients A, B, C of the set of linear equations, and applies the coefficients A, B, C to each pixel that falls within the triangular area to compute an attribute value for the respective pixel.

Claim 8 (Previously Presented): The apparatus of claim 7, wherein the rendering engine applies the coefficient matrix M^{-1} to compute the linear coefficients A, B, C, for an attribute associated with vertices $v_0(x_0,y_0)$, $v_1(x_1,y_1)$, and $v_2(x_2,y_2)$ of the triangle as:

$$\begin{bmatrix} A \\ B \\ C \end{bmatrix} = M^{-1} \begin{bmatrix} v_0 \\ v_1 \\ v_2 \end{bmatrix},$$

where a coefficient matrix M equals:

$$M = \begin{bmatrix} x_0 & y_0 & 1 \\ x_1 & y_1 & 1 \\ x_2 & y_2 & 1 \end{bmatrix},$$

where the inverse coefficient matrix M^{-1} equals:

$$M^{-1} = \frac{1}{\det(M)} M_C^T,$$

where $\det(M)$ equals:

$$\det(M) = |M| = x_1 y_2 + x_2 y_0 + x_0 y_1 - x_2 y_1 - x_0 y_2 - x_1 y_0,$$

where M^T_C is a transpose of matrix M_C,

where matrix M_C equals:

$$M_c = \begin{bmatrix} y_1 - y_2 & x_2 - x_1 & x_1 y_2 - x_2 y_1 \\ y_2 - y_0 & x_0 - x_2 & x_2 y_0 - x_0 y_2 \\ y_0 - y_1 & x_1 - x_0 & x_0 y_1 - x_1 y_0 \end{bmatrix}, \text{ and}$$

an attribute value for each pixel (X_c, Y_c) is computed as

$$v = AX_c + BY_c + C.$$

Claim 9 (Previously Presented): The apparatus of claim 1, further comprising a z-buffer storing a set of z-values associated with the pixels, and wherein the rendering engine compares a z-value, z_c, of the current pixel with a corresponding z-value, z_b, of a z-buffer to determine whether each pixel within the rectangular area is visible and selectively renders each pixel of the rectangular area that is visible and that falls within the triangular area.

Claim 10 (Original): The apparatus of claim 1, further comprising a control unit that issues a command to the rendering engine that specifies vertices of the triangular area.

Claim 11 (Previously Presented): The apparatus of claim 1, wherein the rendering engine comprises:

a vertex buffer for buffering the vertices of the triangular area to be rendered;

a bounding box generator that processes the vertices to compute bounding data that define the dimensions of the rectangular area; and

a rasterizer that processes the bounding data and evaluates coordinates associated with one or more of the pixel values of the rectangular area to selectively render pixels that fall within the triangular area.

Claim 12 (Original): The apparatus of claim 11, further comprising:

an edge coefficient generator that receives the vertices buffered by the vertex buffer and processes the vertices to compute linear coefficients for a set of linear equations that describe edges of the triangular area, and

an attribute coefficient generator that processes the vertices to compute linear coefficients for a set of linear equations that describe one or more attributes associated with the triangular area, wherein

the rasterizer processes the bounding data and the coefficients in accordance with the sets of linear equations to render the pixels that fall within the triangular area.

Claim 13 (Original): The apparatus of claim 1, wherein the apparatus comprises a wireless communication device.

Claim 14 (Original): The apparatus of claim 1, wherein the apparatus comprises an integrated circuit.

Claim 15 (Previously Presented): The apparatus of claim 1, further comprising a cache memory to store at least a portion of the pixels within the rectangular area, wherein the cache

memory has a block size, and the rendering engine defines the rectangular area as a function of the block size of the cache memory.

Claims 16-31 (Cancelled)

Claim 32 (Currently Amended): An apparatus comprising:

means for rendering that defines a rectangular area of pixels that bounds an entire triangular area of the pixels that defines a triangle to be rendered, wherein the rectangular area of pixels includes one or more lines of pixels;

the means for rendering further selects each of the one or more lines of pixels within the rectangular area of pixels, sequentially evaluates coordinates associated with the pixels of each line of pixels starting at one end of the rectangular area to determine whether the one or more pixels fall within the triangular area, wherein the one end of the rectangular area is common for the sequential evaluation of each line of pixels, and ceases evaluation of the coordinates associated with the pixels of each line of pixels upon determining that at least one pixel of the line falls within the triangular area and a current pixel no longer falls within the triangular area; and

means for storing information indicating which of the pixels fall within the triangular area.

Claim 33 (Previously Presented): The apparatus of claim 32, wherein the means for rendering evaluates the coordinates of the pixels in accordance with a set of linear equations that describe edges of the triangular area.

Claim 34 (Previously Presented): The apparatus of claim 33, wherein the means for rendering computes a coefficient matrix M_C for computing linear coefficients for the set of linear equations, and applies the coefficient matrix M_C to one or more pixels within the rectangular area to determine whether each of the one or more pixels falls within the triangular area.

Claim 35 (Currently Amended): The apparatus of claim 34, wherein the means for rendering applies the coefficient matrix M_C to a current one of the one or more pixels (X_C, Y_C) within the rectangular area, wherein ~~to determine whether:~~

~~$$M_C \begin{bmatrix} X_C \\ Y_C \\ 1 \end{bmatrix} \leq \begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$$, where~~

the coefficient matrix M_C equals:

$$M_c = \begin{bmatrix} y_1 - y_2 & x_2 - x_1 & x_1 y_2 - x_2 y_1 \\ y_2 - y_0 & x_0 - x_2 & x_2 y_0 - x_0 y_2 \\ y_0 - y_1 & x_1 - x_0 & x_0 y_1 - x_1 y_0 \end{bmatrix} \text{ and}$$

vertices $v_0(x_0,y_0)$, $v_1(x_1,y_1)$, and $v_2(x_2,y_2)$ are vertices of the triangular area, wherein the means for rendering determines that the current one of the one or more pixels is within the triangular area when $M_c \begin{bmatrix} X_C \\ Y_C \\ 1 \end{bmatrix} \leq \begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$.

Claim 36 (Previously Presented): The apparatus of claim 32, wherein the means for rendering selectively renders the pixels that fall within the triangular area by computing updated pixel data for those pixels in accordance with a set of linear equations that describe one or more attributes associated with the triangular area.

Claim 37 (Previously Presented): The apparatus of claim 36, wherein the attribute values comprise at least one of color values and texture values.

Claim 38 (Previously Presented): The apparatus of claim 36, wherein the means for rendering computes an inverse coefficient matrix M^1 for computing linear coefficients A, B, C of the set of linear equations, and applies the coefficients A, B, C to each pixel that falls within the triangular area to compute an attribute value for the respective pixel.

Claim 39 (Previously Presented): The apparatus of claim 38, wherein the means for rendering applies the coefficient matrix M^{-1} to compute the linear coefficients A, B, C, for an attribute associated with vertices $v_0(x_0,y_0)$, $v_1(x_1,y_1)$, and $v_2(x_2,y_2)$ of the triangle as:

$$\begin{bmatrix} A \\ B \\ C \end{bmatrix} = M^{-1} \begin{bmatrix} v_0 \\ v_1 \\ v_2 \end{bmatrix},$$

where a coefficient matrix M equals:

$$M = \begin{bmatrix} x_0 & y_0 & 1 \\ x_1 & y_1 & 1 \\ x_2 & y_2 & 1 \end{bmatrix},$$

where the inverse coefficient matrix M^{-1} equals:

$$M^{-1} = \frac{1}{\det(M)} M_C^T,$$

where $\det(M)$ equals:

$$\det(M) = |M| = x_1y_2 + x_2y_0 + x_0y_1 - x_2y_1 - x_0y_2 - x_1y_0,$$

where M^T_C is a transpose of matrix M_C,

where matrix M_C equals:

$$M_c = \begin{bmatrix} y_1 - y_2 & x_2 - x_1 & x_1y_2 - x_2y_1 \\ y_2 - y_0 & x_0 - x_2 & x_2y_0 - x_0y_2 \\ y_0 - y_1 & x_1 - x_0 & x_0y_1 - x_1y_0 \end{bmatrix}, \text{ and}$$

an attribute value for each pixel (X_c, Y_c) is computed as

$$v = AX_c + BY_c + C.$$

Claim 40 (Previously Presented): The apparatus of claim 32, further comprising a means for storing a set of z-values associated with the pixels, and wherein the means for rendering compares a z-value, z_c, of the current pixel with a corresponding z-value, z_b, of a z-buffer to determine whether each pixel within the rectangular area is visible and selectively renders each pixel of the rectangular area that is visible and that falls within the triangular area.

Claim 41 (Previously Presented): The apparatus of claim 32, further comprising a means for controlling that issues a command to the means for rendering that specifies vertices of the triangular area.

Claim 42 (Previously Presented): The apparatus of claim 32, wherein the means for rendering comprises:

means for buffering the vertices of the triangular area to be rendered;

means for processing the vertices to compute bounding data that define the dimensions of the rectangular area; and

means for processing the bounding data and evaluates coordinates associated with one or more of the pixel values of the rectangular area to selectively render pixels that fall within the triangular area.

Claim 43 (Previously Presented): The apparatus of claim 42, further comprising:

means for receiving the vertices buffered by the means for buffering and means for processing the vertices to compute linear coefficients for a set of linear equations that describe edges of the triangular area, and

means for processing the vertices to compute linear coefficients for a set of linear equations that describe one or more attributes associated with the triangular area, wherein

the means for processing the bounding data processes the bounding data and the coefficients in accordance with the sets of linear equations to render the pixels that fall within the triangular area.

Claim 44 (Previously Presented): The apparatus of claim 32, wherein the apparatus comprises a wireless communication device.

Claim 45 (Previously Presented): The apparatus of claim 32, wherein the apparatus comprises an integrated circuit.

Claim 46 (Previously Presented): The apparatus of claim 32, further comprising a cache memory to store at least a portion of the pixels within the rectangular area, wherein the cache memory has a block size, and the means for rendering defines the rectangular area as a function of the block size of the cache memory.

Claim 47-61 (Cancelled)

Claim 62 (Currently Amended): A computer-readable storage medium comprising one or more memory devices that store instructions that cause one or more processors to:

define a rectangular area of pixels that bounds an entire triangular area of the pixels that defines a triangle to be rendered, wherein the rectangular area of pixels includes one or more lines of pixels;

select each of the one or more lines of pixels within the rectangular area of pixels;

sequentially evaluate coordinates associated with the pixels of each line of pixels starting at one end of the rectangular area to determine whether the one or more pixels fall within the triangular area, wherein the one end of the rectangular area is common for the sequential evaluation of each line of pixels;

cease evaluation of the coordinates associated with the pixels of each line of pixels upon determining that at least one pixel of the line falls within the triangular area and a current pixel no longer falls within the triangular area; and

store information indicating which of the pixels fall within the triangular area.

Claim 63 (Previously Presented): The computer readable storage medium of claim 62, wherein the coordinates of the pixels are evaluated in accordance with a set of linear equations that describe edges of the triangular area.

Claim 64 (Previously Presented): The computer readable storage medium of claim 63, further comprising instructions that cause one or more processors to compute a coefficient matrix M_C for computing linear coefficients for the set of linear equations, and to apply the coefficient matrix M_C to one or more pixels within the rectangular area to determine whether each of the one or more pixels falls within the triangular area.

Claim 65 (Currently Amended): The computer readable storage medium of claim 64, further comprising instructions that cause one or more processors to apply the coefficient matrix M_C to a current one of the one or more pixels (X_C, Y_C) within the rectangular area, wherein ~~to determine whether:~~

~~$$M_C \begin{bmatrix} X_C \\ Y_C \\ 1 \end{bmatrix} \leq \begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$$, where~~

the coefficient matrix M_C equals:

$$M_c = \begin{bmatrix} y_1 - y_2 & x_2 - x_1 & x_1 y_2 - x_2 y_1 \\ y_2 - y_0 & x_0 - x_2 & x_2 y_0 - x_0 y_2 \\ y_0 - y_1 & x_1 - x_0 & x_0 y_1 - x_1 y_0 \end{bmatrix} \text{ and}$$

vertices $v_0(x_0,y_0)$, $v_1(x_1,y_1)$, and $v_2(x_2,y_2)$ are vertices of the triangular area, wherein the instructions cause the one or more processors to determine that the current one of the one or more pixels is within the triangular area when $M_c \begin{bmatrix} X_C \\ Y_C \\ 1 \end{bmatrix} \leq \begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$.

Claim 66 (Previously Presented): The computer readable storage medium of claim 62, further comprising instructions that cause one or more processors to selectively render the pixels that fall within the triangular area by computing updated pixel data for those pixels in accordance with a set of linear equations that describe one or more attributes associated with the triangular area.

Claim 67 (Previously Presented): The computer readable storage medium of claim 66, wherein the attribute values comprise at least one of color values and texture values.

Claim 68 (Previously Presented): The computer readable storage medium of claim 66, further comprising instructions that cause one or more processors to compute an inverse coefficient matrix M^{-1} for computing linear coefficients A, B, C of the set of linear equations, and to apply the coefficients A, B, C to each pixel that falls within the triangular area to compute an attribute value for the respective pixel.

Claim 69 (Previously Presented): The computer readable storage medium of claim 68, further comprising instructions that cause one or more processors to apply the coefficient matrix M^{-1} to compute the linear coefficients A, B, C, for an attribute associated with vertices $v_0(x_0,y_0)$, $v_1(x_1,y_1)$, and $v_2(x_2,y_2)$ of the triangle as:

$$\begin{bmatrix} A \\ B \\ C \end{bmatrix} = M^{-1} \begin{bmatrix} v_0 \\ v_1 \\ v_2 \end{bmatrix},$$

where a coefficient matrix M equals:

$$M = \begin{bmatrix} x_0 & y_0 & 1 \\ x_1 & y_1 & 1 \\ x_2 & y_2 & 1 \end{bmatrix},$$

where the inverse coefficient matrix M^{-1} equals:

$$M^{-1} = \frac{1}{\det(M)} M_C^T,$$

where $\det(M)$ equals:

$$\det(M) = |M| = x_1y_2 + x_2y_0 + x_0y_1 - x_2y_1 - x_0y_2 - x_1y_0,$$

where M^T_C is a transpose of matrix M_C,

where matrix M_C equals:

$$M_c = \begin{bmatrix} y_1 - y_2 & x_2 - x_1 & x_1y_2 - x_2y_1 \\ y_2 - y_0 & x_0 - x_2 & x_2y_0 - x_0y_2 \\ y_0 - y_1 & x_1 - x_0 & x_0y_1 - x_1y_0 \end{bmatrix}, \text{ and}$$

an attribute value for each pixel (X_c, Y_c) is computed as

$$v = AX_c + BY_c + C.$$

Claim 70 (Previously Presented): The computer readable storage medium of claim 62, further comprising instructions that cause one or more processors to store in a z-buffer a set of z-values associated with the pixels, and to compare a z-value, z_c, of the current pixel with a corresponding z-value, z_b, of a z-buffer to determine whether each pixel within the rectangular area is visible and selectively renders each pixel of the rectangular area that is visible and that falls within the triangular area.

Claim 71 (Previously Presented): The computer readable storage medium of claim 62, further comprising instructions that cause one or more processors to issue a command that specifies vertices of the triangular area.

Claim 72 (Previously Presented): The computer readable storage medium of claim 62, further comprising instructions that cause one or more processors to:

buffer the vertices of the triangular area to be rendered;

process the vertices to compute bounding data that define the dimensions of the rectangular area; and

process the bounding data and evaluating coordinates associated with one or more of the pixel values of the rectangular area to selectively render pixels that fall within the triangular area.

Claim 73 (Previously Presented): The computer readable storage medium of claim 72, further comprising instructions that cause one or more processors to:

receive the buffered vertices and process the vertices to compute linear coefficients for a set of linear equations that describe edges of the triangular area, and

process the vertices to compute linear coefficients for a set of linear equations that describe one or more attributes associated with the triangular area, wherein

the bounding data and the coefficients are processed in accordance with the sets of linear equations to render the pixels that fall within the triangular area.

Claim 74 (Previously Presented): The computer readable storage medium of claim 62, wherein the instructions are contained in a wireless communication device.

Claim 75 (Previously Presented): The computer readable storage medium of claim 62, wherein the one or more processors are integrated circuits.

Claim 76 (Previously Presented): The computer readable storage medium of claim 62, further comprising instructions that cause one or more processors to store to a cache memory at least a portion of the pixels within the rectangular area, wherein the cache memory has a block size, and to define the rectangular area as a function of the block size of the cache memory.

Claim 77 (Previously Presented): The apparatus of claim 1, wherein the rendering engine sequentially evaluates coordinates associated with the pixels of each line of pixels in a rightward and downward fashion.

Claim 78 (Previously Presented): The apparatus of claim 32, wherein the means for rendering sequentially evaluates coordinates associated with the pixels of each line of pixels in a rightward and downward fashion.

Claim 79 (Previously Presented): The computer readable storage medium of claim 62, wherein sequentially evaluate coordinates associated with the pixels of each line of pixels to determine whether the pixels fall within the triangular area comprises evaluating the pixels in a rightward and downward fashion.

Claim 80 (New): The apparatus of claim 1, wherein the apparatus comprises a mobile phone.